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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/144,635

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DALE L. BARTHOLOMEW

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VERIZON  
PATENT MANAGEMENT GROUP  
1515 N. COURTHOUSE ROAD, SUITE 500  
ARLINGTON, VA 22201-2909

EXAMINER

NG, CHRISTINE Y

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/144,635

Applicant(s)

BARTHOLOMEW ET AL.

Examiner

Christine Ng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/8/09</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5-7, 10-13, 17, 18, 20, 22-27, 33-35, 46, 59 and 60 are rejected under 35 U.S.C. 102(e) as being anticipated by over U.S. Patent No. 6,314,102 to Czerwiec.

Czerwiec discloses a telecommunication system for providing both narrowband and broadband services to subscribers, comprising: requesting from a CP terminal (element 76 in Fig. 2) via a local link to a line unit and telephone switch, a communication path to a destination, detecting via a monitor (junction 66 in Fig. 2) decides whether the request is passed to low pass filter 40 or high pass filter 38, column 11 lines 13-35) that a request does not seek/seeks conversion in a line unit (ADSL-LT card, detecting broadband or narrowband request, column 4 lines 37-50), connecting said terminal through a portion of said line unit around a converter to a wideband data switch connected to a data network (connecting thru ADSL-LT card (element 14a in Fig. 10)) to ATM switch (element 48 in Fig. 2, column 11 lines 13-20), as in claims 1, 18 and 27; said switching system is connected to a DSP (front-end DSP chip element in Fig. 10, column 17 lines 35-43), as in claims 7, 24; said DSP is associated with said line unit

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(front-end DSP chip element in Fig. 10, column 17 lines 35-43), as in claims 10, 25; said DSP is associated with said wideband switch (the ATM function of the front-end DSP chip element in Fig. 10, column 17 lines 35-43), as in claims 11, 26; said DSP is integrated with said line unit (front-end DSP chip element in Fig. 10, column 17 lines 35-43), as in claim 12; said request is made by emitting from said terminal a signal of a predetermined characteristic and detecting is made by a detecting device associated with the line unit, as in claims 13, 20; said line unit comprises a line card (LT card in Fig. 10), as in claim 17; said switching system provides hard wired switching (through the DSP processor), as in claims 5, 22; said switching system provides hard wired switching between said terminal and said wideband data switch (hard wired switching obtained through the front-end DSP element in Fig. 10), as in claims 6, 23; receiving a signal via a local link from a CP (element 76 in Fig. 2) in a network connected via a local link to a program controlled switch in said network (column 11 lines 42-46), making a determination regarding a pre-established characteristic of said signal and responsive to said determination switching said signal to digital signal processing and a wideband edge device (broadband/ narrowband detection, column 4 lines 37-50), as in claim 27; said signal processing is performed in a processor separate from said edge device (DSP front-end element in LT card in Fig 10), as in claim 33; the processor (DSP front-end element in LT card in Fig 10) performing said digital signal processing is associated with a line unit through a portion of which said signal is conducted (wideband signal passes through ADSL-LT), as in claim 34; processor (DSP front-end element in LT card in Fig 10) performing said digital signal processing comprises a part of said line unit, as

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in claim 35; for connection to a local link (element 34 in Fig. 2, column 10 lines 54-66), the switch comprising a first port for narrowband communication (first port for connection to POTS) and a second port for connection to a broadband data network (second port for connection to ATM), means for detecting a request for a broadband device and in response controlling the switch to connect the local link to the second port (column 11 lines 13-20), as in claim 46. Referring to claim 59, refer to the rejections of claim 27, claim 33 and claim 34. Referring to claim 60, refer the rejection of claim 35.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2-4, 8, 9, 19, 21, 28, 29 and 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,314,102 to Czerwiec in view of admitted prior art AT&T (Lucent) System description 235-100-125 September, 1995.

Referring to claims 2-4, 8, 9, 19, 21, 28 and 29, Czerwiec did not specifically disclose said portion of said line comprising a concentrator of said line unit, as in claims 2, 19; said converter comprising a CODEC, as in claim 3; said concentrator includes a switching system, as in claims 4, 21; said switching system comprising GDX cross point switching, as in claim 8; said switching system comprising cross point switching, as in claims 9, 28; said cross-point switching is performed in a line unit in said network, as in claim 29.

AT&T (Lucent) System description 235-100-125 September, 1995 discloses: said portion of said line comprises a concentrator of said line unit (the space division line concentrator in page 1), as in claims 2, 19; said converter comprises a CODEC (the coder-decoder element under BORSCHT functions in page 1), as in claim 3; said concentrator includes a switching system (the solid state switching grids, second paragraph in page 2), as in claims 4, 21; said switching system comprises GDX cross point switching (solid state GDX switching grids, second paragraph in page 2), as in claim 8; said switching system comprises cross point switching (GDX crosspoints, paragraph 9, page 2), as in claims 9, 28; said cross-point switching is performed in a line unit in said network (GDX crosspoints, paragraph 9, page 2), as in claim 29.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to provide the line unit elements as disclosed in the AT&T system description with the motivation of obtaining a telecommunication system in which plain old telephone service and a broadband digital service are simultaneously provided to individual subscribers on conventional transmission lines.

Referring to claim 37, refer to the rejection of claim 46, claim 2, claim 3, claim 4 and claim 9.

Referring to claim 38, refer to the rejection of claim 5.

Referring to claim 39, refer to the rejection of claim 11.

Referring to claim 40, refer to the rejection of claim 5 and claim 6.

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4. Claims 14 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,314,102 to Czerwiec in view of U.S. Patent No. 6,083,280 to Eitel.

Referring to claim 14, Czerwiec do not disclose signaling a CPU controlling said telephone network switch to effect an entry in a journal of said telephone network switch, and using said entry for billing for the communications path set up in response to said requesting step.

Eitel discloses that when a call request is first received by a local telephone switch by the calling party, a billing file is created based upon factors such as the service rate of the calling party, the identity of the called party, time of day, etc. One the billing file is created, a controller of the local switch can determine how to establish the connection to the called party. Refer to Column 1, lines 43-60. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to include signaling a CPU controlling said telephone network switch to effect an entry in a journal of said telephone network switch, and using said entry for billing for the communications path set up in response to said requesting step. One would be motivated to do so in order to provide a method of billing the customer for a particular communications session.

Referring to claim 53, refer the rejection of claim 1 and claim 14.

5. Claims 15, 16, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,314,102 to Czerwiec in view of U.S. Patent No. 6,760,766 to Sahlqvist.

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Referring to claim 15, Czerwiec do not disclose wherein said connecting step through a portion of said line unit around a converter therein to a wideband width is a virtual hard wired connection.

Sahlqvist discloses that network connections may be hard-wired electrical or virtual, and that networks can incorporate mixtures of both physical and virtual connections. Refer to Column 4, lines 44-53. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein said connecting step through a portion of said line unit around a converter therein to a wideband switch is a virtual hard wired connection. One would be motivated to do so in order to save physical space by making connections virtual.

Referring to claim 16, Czerwiec disclose in Figure 2 wherein said connection to said wide band network (ATM network) is through an ATM edge device (ATM switch 48). Refer to Column 11, lines 13-20.

Referring to claim 54, refer to the rejection of claims 1 and 15.

Referring to claim 55, refer to the rejection of claim 16.

6. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,314,102 to Czerwiec in view of admitted prior art AT&T (Lucent) System description 235-100-125 September, 1995, and in further view of U.S. Patent No. 4,143,242 to Horiki.

Referring to claim 30, Czerwiec do not disclose said cross-point switching directing said signal away from a two way digital/analog converter in said line unit having predetermined narrowband digital bit-rate capabilities.



Horiki disclose in Figure 1 a line unit which includes highways for ordinary voice switching and an auxiliary highway for wideband communication. The ordinary voice switching is sent onto a narrowband digital rate channel of a predetermined data rate of 8KHz PCM. The PCM is performed by digital code conversion circuits 7 and 8. Refer to Column 2, line 63 to Column 4, line 42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include said cross-point switching directing said signal away from a two way digital/analog converter in said line unit having predetermined narrowband digital bit-rate capabilities. One would be motivated to do so in order to perform digital/analog conversion of narrowband and wideband communications at different bit rates accordingly.

Referring to claim 31, Czerwiec disclose in Figure 2 wherein said connection to said wide band network (ATM network) is through an ATM edge device (ATM switch 48). Refer to Column 11, lines 13-20.

Referring to claim 32, Czerwiec do not specifically disclose that said digital signal processing occurs in said edge device. However, the digital signal processing can be performed anywhere before reaching the ATM network.

7. Claims 36, 41-45, 47, 48 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,314,102 to Czerwiec in view of U.S. Patent No. 4,143,242 to Horiki.

Referring to claims 36 and 45, Czerwiec do not disclose a digital signal processor

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with a programmed controller providing coding and decoding function adapted to a service requested by the detected signal and the physical level protocol used over the one local link.

Horiki disclose in Figure 1 a line unit which includes highways for ordinary voice switching and an auxiliary highway for wideband communication. The ordinary voice switching is sent at a data rate of 8KHz PCM and the wideband communication is sent at a higher data rate of 32KHz PCM. The coding and decoding functions depend on whether the signal is narrowband or wideband, which controls the transmission of the signal over the physical level. Refer to Column 2, line 63 to Column 4, line 42.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include converting signals on the plurality of local links to digital signals at a predetermined narrowband bit-rate. One would be motivated to do so in order to provide for different modulation schemes for narrowband and wideband communications, which operate at different bit rates.

Referring to claim 41, refer to the rejection of claim 46, claim 2 and claim 4.

Czerwec do not disclose converting signals on the plurality of local links to digital signals at a predetermined narrowband bit-rate.

Horiki disclose in Figure 1 a line unit which includes highways for ordinary voice switching and an auxiliary highway for wideband communication. The ordinary voice switching is sent onto a narrowband digital rate channel of a predetermined data rate of 8KHz PCM. Refer to Column 2, line 63 to Column 4, line 42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

include converting signals on the plurality of local links to digital signals at a predetermined narrowband bit-rate. One would be motivated to do so in order to modulate the narrowband and wideband communications at different bit rates accordingly.

Referring to claim 42, refer to the rejection of claim 4 and claim 8.

Referring to claim 43, refer to the rejection of claim 5 and claim 6.

Referring to claim 44, Czerwiec disclose in Figure 2 that said line unit delivers said signal on the one link to said port in unconverted format. If the signal is a narrowband request, the signal can be sent around the converter to the wideband switch. Refer to Column 4, lines 37-50.

Referring to claim 47, Czerwiec disclose in Figure 2 a channel circuit, coupled to the first port (first port for connection to POTS), for channeling signals for communication via the local link. Refer to the rejection of claim 46.

Czerwiec do not disclose a predetermined digital rate channel corresponding to the narrowband communication.

Horiki disclose in Figure 1 a line unit which includes highways for ordinary voice switching and an auxiliary highway for wideband communication. The ordinary voice switching is sent onto a narrowband digital rate channel of a predetermined data rate of 8KHz PCM. Refer to Column 2, line 63 to Column 4, line 42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a predetermined digital rate channel corresponding to the narrowband

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communication. One would be motivated to do so in order to modulate the narrowband and wideband communications at different bit rates accordingly.

Referring to claim 48, refer to the rejection of claim 46 and claim 47.

Referring to claim 56, refer to the rejection of claim 27 and claim 30.

Referring to claim 57, refer to the rejection of claim 31.

Referring to claim 58, refer to the rejection of claim 32.

8. Claims 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,314,102 to Czerwiec in view of U.S. Patent No. 6,163,599 to McHale.

Czerwiec disclose in Figure 2 that the monitor (junction 66) includes a signal processor (to process the narrowband and wideband signals in frequency division multiplexing) and a controller (low pass filter 40 and high pass filter 38), wherein the controller is located in the line unit. Refer to Column 11, lines 13-35.

However, Czerwiec do not disclose that the monitor includes a scan point matrix switches.


McHale disclose in Figure 4 a cross-point matrix switch that switches a plurality of input data lines 54/150 to a plurality of output data lines 72/152. Refer to Column 10, line 50 to Column 11, line 3. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the monitor includes a scan point matrix switches. One would be motivated to do so in order to provide the monitor with a means of switching signals from certain input lines to certain output lines.

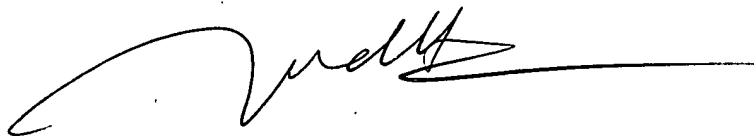
**Conclusion**

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C. Ng   
October 19, 2006



HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600